



Docket No.: 8733.561.00
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
YOO, et al

Customer No.: 30827

Application No.: 10/026,477

Confirmation No.: 7762

Filed: December 27, 2001

Art Unit: 2871

For: LIQUID CRYSTAL DISPLAY DEVICE AND
METHOD FOR MANUFACTURING
THE SAME

Examiner: RUDE, Timothy L.

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

The Applicants request a review of the final Office Action dated December 15, 2006 for the reasons discussed below.

In the Office Action, claims 15-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,133,967 to Moon (hereinafter "Moon") in view of U.S. Patent No. 5,815,226 (Yamazaki). Claims 23-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Moon in view of Yamazaki and further in view of U.S. Patent No. 6,545,730 (Hwang).

The rejection of claims 15-22 is respectfully traversed and reconsideration is requested. Claims 15-22 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, "a first insulating layer formed on an entire surface of the first substrate except an upper portion of the storage capacitor electrode". Moon

and Yamazaki do not teach or suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that claims 15-22 are allowable over the cited references.

In rejecting independent claim 15, from which claims 16-22 variously depend, the Examiner asserts that although Moon fails to disclose a first insulating layer formed on an entire surface of the first substrate except an upper portion of the storage capacitor electrode, it would have been obvious to one skilled in the art to modify the LCD of Moon such that the insulating gate layer 5 is removed only from the capacitor electrode to facilitate formation of a capacitor with increased capacity. To support this conclusion, the Examiner makes various assertions, each of which are unfounded as discussed below.

First, the Examiner asserts that the teachings of Moon render the claimed invention obvious since there is no disclosed functional significance to the structural difference between Moon and the claimed invention. However, whether or not Applicants' disclosure or Moon discloses a functional significance to the structural differences between the claimed LCD and the LCD of Moon is not germane to the patentability of the claimed invention. Independent claim 15 defines an apparatus comprising a specified structure. Therefore, the patentability of claim 15 rests on the claimed structure, not the functionality achieved by said structure. In Moon, the substrate between the gate electrode 3 and the storage electrode 4 may have good dielectric characteristics, but may have poor protective characteristics, so the substrate is not properly protected from the liquid crystal. Therefore, the structural differences between Moon and the present invention, are significant.

The Examiner also asserts that in considering the disclosure of a reference it is proper to take into account not only specific teachings of the reference but also that inferences which one skilled in the art would reasonably be expected to draw there from. The Examiner states the following as a reason for modifying Moon:

Furthermore, it is well known in the art that removal of an insulation layer takes time, effort, and cost, so one would be inclined to remove only that minimal portion. Alternately, some elect to expend the additional time, effort, and cost, to remove unnecessary insulation layer(s) from the pixel region in order to slightly improve optical performance. Such cost performance trade-offs are well known in the art at the time the claimed invention was made, which reinforces examiner's position that they are obvious variations. In this case, Applicant's species is the

lower cost species while the applied prior art teaches the higher optical performance species.

Again, the Examiner has not provided any documentary evidence to support his assertion. Further, this assertion can be argued to be flawed for the following reason. The Examiner states that moving just a small portion of the first insulating layer is a lower cost option. In reality it may be a higher cost option, because moving a small portion in a precise location, as would be required to achieve the structure claimed, could require tighter manufacturing tolerances than removing the layer everywhere or everywhere except for an area where the tolerances are not strict. The bottom line is that the Examiner has not found (as he admits) a reference that teaches the claimed structure of the present invention. In order to overcome this, he tries to broaden the cited reference using unfounded arguments. Accordingly, claims 15-22 are allowable over Moon, and Yamazaki fails to cure the deficiencies of Moon. Yamazaki is cited as related to other features of the claimed invention.

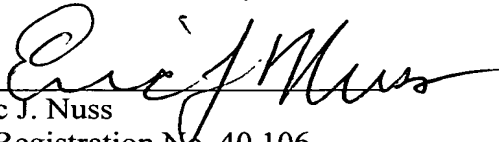
Claims 23-25 are allowable over Moon and Yamazaki for the same reasons stated above. Further, Hwang fails to cure the deficiencies of Moon and Yamazaki.

In light of the remarks noted above, the Applicants submit that the pending claims are patentable over the prior art cited in the December 15, 2006 final Office Action. Accordingly, the Applicants respectfully request that the PTO issue a Notice of Allowance or a new Office Action.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

Dated: **15 March 2007**

Respectfully submitted,

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